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When history does not matter?
The rise of Quebec's wine industry

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Abstract. This article contributes to the debate on new regional path development, proposing an analytical framework that accounts for new industries arising almost *ex nihilo* in places with weakly developed preconditions. The paper explores how seemingly adverse initial conditions can be translated into a new development path over time and casts light on the interplay between structure and agency in such settings. We find that new path development processes are not necessarily conditioned by past trajectories or by prior regional and technological capabilities, but can be initiated by forward-looking, entrepreneurial pioneers and consolidated by actors who develop the wider institutional and organizational structures to facilitate further growth of the new industry. We study the case of the wine industry in Southern Quebec, which emerged despite weakly developed preconditions and developed into a fully established, legitimized and supported path over the past forty years.

Keywords: Path development, structure, agency, wine industry, Quebec

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Introduction

The question of how new industries and economic activities emerge and grow in regions is a central theme of evolutionary economic geography (MacKinnon et al. 2019). Scholars have examined the forms, mechanisms and geographical patterns of new industry formation (Hassink et al. 2019), alongside historical and institutional path dependencies (Boschma and Frenken 2011; Martin and Sunley 2006). Key questions relate to the origins of new industries and to how regions develop new sources of industrial growth. Various approaches have been employed to tackle these queries. They have been explored through the concept of windows of locational opportunity (WLO) (Storper and Walker 1989), in research on clusters and industry formation dynamics (e.g. Menzel and Fornahl 2010) and in work on regional diversification and relatedness (Boschma 2017). Recently, there have been calls for broader conceptualization of new path development that goes '*beyond the related and unrelated diversification dichotomy*', taking account of differentiated typologies '*with a wide range of sources, mechanisms, and local and non-local capabilities*', including closer attention to '*the social, cultural and institutional environment of economic activities*' (Hassink et al. 2019, 1637).

Earlier perspectives on the development of new growth paths[1] highlight the locational freedom of emerging industries (Storper and Walker 1989) and the impact of exogeneous perturbations, chance events or historical accidents as triggers of change (Krugman 1991).

[1] Following Binz et al. (2016, 177) we define a new industrial path as '*a set of functionally related firms and supportive actors and institutions that are established and legitimized beyond emergence and facing early stages of growth, developing new processes and products*'.

In contrast, more recent approaches emphasize the role of regional structural preconditions and share the key argument that new industrial paths emerge out of existing economic activities, assets and competencies (Martin 2010; Boschma 2017). Studies have indeed found evidence that new industries are rooted in pre-existing local knowledge bases and the historical economic structure of a region (Boschma and Frenken 2011; Neffke et al. 2011).

This article examines an industry which emerged almost *ex nihilo*, the wine industry in Southern Quebec. Our inquiry explores the creation of a new path that bears no obvious relationship to historical conditions, to pre-existing regional, institutional, or technological capabilities nor to favorable natural conditions (Philips 2017). From a viticulture perspective, climate change has recently enabled the production of grapes with some oenological potential (Jones 2019), but this occurred after the entrepreneurial beginnings of the wine industry in the early 1980s. Thus, even though viticulture has a longstanding history elsewhere, it is new to the region of Southern Quebec, does not rely on deep-seated local traditions, and its recent growth rests on no prior local knowledge base, no firm clustering, nor on an initial endowment of support organizations (Doloreux and Frigon 2019).

The case therefore sheds light on new path development in a region presenting such unfavorable preconditions. However, in contrast to earlier accounts of industry emergence that downplay the role of regional preconditions, this paper does not explain the rise of Quebec's wine industry by neglecting structural influences, but by reconsidering the opportunities and constraints inherent in certain structural configurations (Baumgartinger-Seiringer et al. 2020) and by exploring the role of agents in exploiting opportunities and overcoming constraints over time (Grillitsch and Sotarauta, 2020; MacKinnon et al. 2019). In other words, the rise of Quebec's wine industry is not apprehended as the result of exogeneous perturbations, chance events or windows of locational opportunity that would have been open in many places, but as the outcome of interplay between distinct regional structural conditions and particular types of agency. Thus, following Hassink, Isaksen, and Trippl (2019), we suggest a comprehensive approach to how new economic activities emerge and grow in regions, shedding light on a range of different relevant actors, on mechanisms beyond path branching and on regional institutional conditions and dynamics.

This paper makes two key contributions. First, we challenge established perspectives on seemingly weak structural preconditions for new path development and cast light on the potentials for industry emergence residing in such settings, particularly in early phases of new path development. Second, in line with other recent contributions (Simmie 2012; Boschma et al. 2017; Grillitsch and Sotarauta 2020), we contend that structural perspectives alone are insufficient to explain how, where and why new industrial paths develop in regions, paying explicit attention to the decisive role played by agency. To this end, we adopt a dynamic multi-actor approach and seek to unravel how multiple agents translate seemingly weak structural preconditions into a new, established and institutionalized industrial path over time.

Literature review and analytical framework

There is widespread consensus in economic geography that some places are better suited to nurture new industries than others (Martin 2010). In particular, the 'evolutionary turn' in economic geography has sparked interest in what constitutes a favorable environment for the rise of new industries.

Industries never arise out of a complete void (Gustafsson et al. 2016) and the (regional) factors and conditions that influence industry emergence often reflect a locality's economic, social, cultural, and institutional history (Martin 2010). Assuming that economic development is contextual[2] (Hassink et al. 2019; Gong and Hassink 2020), evolutionary economic geography (EEG) has led to better understanding of structural preconditions for new path development. However, in this paper we argue that established perspectives provide an incomplete view of how structural preconditions affect the emergence of new industries in regions (Baumgartinger-Seiringer et al. 2020).

Weak structural preconditions in the EEG literature

Earlier accounts of path development portray the creation of new industrial paths either as the result of historical accidents, random events with a significant long-term effect (Krugman 1991), or as the serendipitous outcome of 'windows of locational opportunity'

[2] In general terms, context can be defined as '*the wider settings (subject to change) in which key objects and events are embedded (for example, in specific regions, countries, time periods, etc.)'* (Gong and Hassink 2020, 2).

that are wide open in early phases of industry emergence due to the "*generic properties of new technologies*" (Dawley 2014, 94). Accordingly, these canonical models of path dependence (Martin 2010) downplay the role of regional preconditions to the point where they hardly matter.

More recent contributions challenge these models, arguing that pre-existing regional structures influence the emergence of new industries, either in a positive or negative way (Martin and Sunley 2006; Martin 2010). Martin (2010) draws attention to place-specific competences, skills and experiences inherited from previous rounds of regional economic development, which are said to provide a platform for subsequent rounds and constitute either an enabling or constraining environment for new path development. Despite this more dynamic view, the model draws a somewhat dismal outlook for regions with weak structural preconditions: they will struggle to turn their poor endowments of historically inherited assets into dynamic environments that support new industrial paths.

The regional diversification literature (Boschma 2017) offers a similar perspective on the role of pre-existing structural conditions. Its core argument is that new industries branch out of existing ones based on the re-combination of related local capabilities (Boschma and Frenken 2011; Boschma 2017). Hence, a regional industry mix that consists of a large variety of different yet related economic activities ('related variety') exhibits a high diversification capacity due to its numerous possible re-combinations. Consequently, regions with low relatedness, where there is little to diversify into, are constraining environments (Balland et al. 2016).

Recently, scholars have developed systemic perspectives on new path development by combining EEG insights with the Regional Innovation System (RIS) approach (Isaksen and Trippl 2016; Trippl et al. 2020). They distinguish between thick and thin RISs, and contend that opportunities for (new) path development vary considerably across these two types of RISs (Isaksen and Trippl 2016). Thin RIS offer weak conditions due to their poor endowments of industrial structures, capable firms, skills, knowledge and other assets, and due to their weak organizational support structures and institutions (Isaksen and Trippl 2016). Empirical studies of new path development in peripheral regions, often equated with thin RISs, suggest that importing and anchoring non-local knowledge and other assets are vital for new path emergence (Binz et al. 2016; Isaksen and Trippl 2017).

Reconsidering weak structural preconditions for new regional industrial path development

These three perspectives - ‘path as a process’, regional diversification, and systemic perspectives - suggest that certain structural configurations either enable or constrain new path development. Moreover, they suggest that weakly developed or absent pre-existing structures are unfavorable, because they hamper the emergence of new industries. Against this backdrop, work on innovation in the periphery often focuses on how innovative activities (that might lead to new path development) occur *despite* the absence of seemingly favorable preconditions (Shearmur 2012). Accordingly, the few contributions explicitly dealing with new path development in the periphery highlight how weak structural conditions can be compensated for through the inflow of external knowledge and policy support (Isaksen and Trippl 2017) or through improvisation strategies and compensation for missing technological relatedness through other forms of relatedness (Carvalho and Vale 2018).

Recently, scholarly work has begun to question the neglect of benefits in peripheral regions and highlight that these areas may offer various advantages to innovative actors (Shearmur 2012, 2017; Mayer and Baumgartner 2014; Grabher 2018; Eder and Trippl 2019). Such potentials include, for instance, a protective space for experimentation, high institutional leeway, soft factors, or cost incentives.

In a more generic vein, Baumgartinger-Seiringer et al. (2020) argue for a critical reassessment of structural preconditions in the context of regional path development. Drawing on organizational institutionalism (Hinings et al. 2017), they cast light on the degree of elaboration and coherence of structural elements and their implications for innovation-based industrial change. Preconditions are not seen as strong or weak *per se*. Rather, the authors highlight that different structural configurations (characterized by various degrees of elaboration and coherence) offer both opportunities for and constraints to path development. Accordingly, the absence of many *relevant* structural elements (resembling 'thinness', Zukauskaite et al. 2017), is indeed a constraint in the sense that there is no platform from which to set alterations in motion (Trippl et al. 2020). However, poor endowment of structural elements might also be beneficial for industrial change, as it offers opportunities for experimentation and niche development that would be hindered in places with more elaborated structures (Baumgartinger-Seiringer et al. 2020).

A well-known example is the rise of the Danish wind turbine industry (Karnoe and Garud 2012) which emerged in the absence of many relevant structural preconditions such as competencies, regulations or markets. While this setting led to challenges (no market framework, no political 'plan', lack of interest and unsuitable materials), at the same time it allowed for a somewhat improvised yet ultimately successful 'bricolage' approach to new path development, enabling experimentation and distributed action (Garud and Karnoe 2003).

Bringing agency into play: Harnessing and valorizing potentials

Structural approaches are insufficient to fully elucidate new industry emergence. Inspired by Garud and Karnoe's (2001, 2003) seminal work, structure-centered perspectives in EEG are to an increasing extent complemented by approaches that highlight the importance of agency[3] in creating, recreating or altering paths (Martin 2014; Boschma et al. 2017; Hassink et al. 2019; Grillitsch and Sotarauta, 2020). Accordingly, for path development to unfold, the opportunities and potentials inherent in structural preconditions must be harnessed and valorized by actors (MacKinnon et al. 2019; Trippl et al. 2020). This opens

[3] Agency can be understood as actions or interventions by actors producing particular effects (Sotarauta and Suvinen 2018).

the debate on path development '*to another classic in social science, namely the interplay between structure and agency*' (Grillitsch and Sotarauta 2018, 5).

Structures and agency are linked through complex interdependence: agency will never be fully determined by structures, nor can agency ever be completely free from them (Emirbayer and Mische 1998). This relationship has been explained through the inter-temporal nature of social action (Emirbayer and Mische 1998): '*agency is a process […] shaped by historically developed structures and perceived futures*' (Grillitsch and Sotarauta 2018, 8). In the context of regional economic change and new path development, agency is often portrayed as a departure from the past towards the future (Garud and Karnøe 2001). The more radical the form of change, the more severe this break from the past must be.

Scholarly contributions on the role of agency in new path development focus on certain actors or actor groups, or/and on different types of agency based on the intention or outcome of purposive action (e.g. Isaksen and Jacobsen 2017; Grillitsch and Sotarauta 2018; Sotarauta et al. 2020). One core aspect of this work is to adopt a multi-actor approach (Hassink, Isaksen, and Trippl 2019), drawing attention not only to the role of innovative entrepreneurs and their 'mindful deviation' from the past (Garud and Karnøe 2001), but also to various non-firm actors (Karnøe and Garud 2012; Binz et al. 2016), such as universities, policy actors or support organizations (Dawley 2014; Vallance 2016).

To this end, Grillitsch and Sotarauta (2020) distinguish between three different types of agency that drive regional path development. First, they highlight the role of Schumpeterian entrepreneurship as a shaping force for change. Schumpeterian entrepreneurship is capable of breaking with existing industrial paths and working towards the realization of new ones. It is driven by the belief in future opportunities, rather than reliance on the past. As this paper will demonstrate, this can be of critical importance to new path development in regions with no apparent favorable preconditions. Second, Grillitsch and Sotarauta focus on institutional entrepreneurship that aims at creating new or transforming existing institutions (formal and informal ones) and organizations (such as economic, political, social and educational bodies). The adaptation of these 'rules of the game' and the wider innovation system structures is often necessary for innovative entrepreneurship to succeed (Musiolik et al. 2012). Third, they draw attention to place-based leadership that completes the 'trinity of change agency'. This type is mainly concerned with mobilizing actors and coordinating their efforts. As such, place-based leadership is stimulating regional path development by launching an interactive process that transcends boundaries and by guiding individual actors to both contribute to and benefit from the broader regional development process that reaches beyond individual ambitions and interests (Grillitsch and Sotarauta, 2020).

Analytical framework

This section builds on the insights outlined above and proposes an analytical framework to apprehend how seemingly weak (or absent) structural preconditions can be translated into new path development. To this end, we argue for (a) acknowledging the ‘bright side’ of weak structural preconditions, and (b) adopting a dynamic multi-actor approach to the role of agency in such settings. It sets out an approach to “*understand the ways actors work to construct and exploit opportunity spaces, change institutions for new development paths and break from path dependency*’ (Grillitsch and Sotarauta 2020, 718) in contexts of weak or absent preconditions.

Reconsidering weak preconditions

Drawing on systemic approaches to new path development, we advocate a differentiated view of potentials residing within seemingly unfavorable structural configurations, without neglecting constraints. Established perspectives suggest that regions poorly endowed with assets offer adverse conditions for new path development.

It is evident that the absence of structural preconditions can inhibit industry emergence. However, such preconditions can also be enabling, a possibility largely overlooked by established views. Localities with weak pre-existing structures can offer freedom for change and a protected environment for niches (Grabher 2018; Eder and Trippl 2020), thereby stimulating experimentation by pioneers (Garud and Karnøe 2001). They can also spur new activities as a survival mechanism for local firms in search of competitive advantage (Shearmur 2012).

In contrast to well-endowed settings, where – often as a consequence of previous success (Martin 2010) – structural configurations tend to facilitate maintenance agency[4], less-elaborated settings allow for more change agency. Hence, pioneering actors might be attracted to (or emerge from) these regions not despite, but because of, their weak structural elements, which present opportunities to break free of rigidities associated with a high structural elaboration[5] (Baumgartinger-Seiringer et al. 2020). Accordingly, in contrast to other work on new path development in weakly developed settings (Isaksen and Trippl 2017; Carvalho and Vale 2018), we focus attention not only on how the constraining environment can be *overcome*, but on how such places – especially in early phases of new path development - may offer *potential and enabling conditions*.

Dynamic multi-actor approach

To understand how potentials are utilized for new path development, we focus upon agents and their actions to valorize and harness regional opportunities (MacKinnon et al. 2019). Drawing on a multi-actor approach (Hassink et al. 2019), we consider both innovative entrepreneurship and agency oriented towards modifying wider regional structures (Isaksen et al. 2019; Trippl et al. 2020; Grillitsch and Sotarauta, 2020).

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[4] According to Jolly et al. (2020, 179), maintenance agency '*involves actions such as introducing new practices to create deterrence for change, supporting the persistence of existing institutional routines, and using narratives to support the routinization of existing practices and adherence to rules'*.

[5] Arguably, this factor is more relevant for 'new-to-the-region' industry emergence, i.e. where the industrial path exists elsewhere (like the wine industry) in contrast to a 'new-to-the-world' type (Gustafsson et al. 2016).

We suggest that new path development unfolds in different stages, ranging from initiation to consolidation, and that different types of agency are of varying importance at each stage, often originating from actors with different backgrounds (Baumgartinger-Seiringer et al. 2021; Jolly et al. 2020).

Turning weak structural preconditions into a new development path over time

In light of these considerations, we distinguish two phases of new path development in places with weak preconditions, an **initiation** and a **consolidation** phase. In the former, the driving actors are a few entrepreneurial **pioneers -** from either inside or outside the region - who identify potential in a region despite objective constraints. They are attracted, on the one hand, by high levels of freedom and leeway for the creation of novelty. On the other hand, the very challenges posed by such weak preconditions might serve as a stimulus and appeal to certain 'stubborn' actors.

With their risky and uncertain initiating and experimenting activities (Garud and Karnoe 2003), these actors exploit the region's potentials and, if successful, can lay early foundations for a new development path. In this respect, Dewald and Truffer (2012) provide interesting insights into how pioneers paved the way for a photovoltaic market in Germany: through early activities such as marketing, educating, lobbying and so on, local citizen groups across the country presented local '*proofs of feasibility*' (Bergek et al. 2015, 58).

However, rarely are such isolated activities sufficient for an emerging industry to grow and consolidate into a fully established path. New path development requires distributed action to jointly modify (or build) regional structures and ultimately create an environment for a new industry to develop and prosper (Garud et al. 2010; Binz et al. 2016; Grillitsch and Sotarauta, 2020).

Seeds planted by pioneers require resources to grow (Miörner and Trippl 2017). While a low degree of structural elaboration provides agility in early phases, it might hinder growth later on (Baumgartinger-Seiringer et al. 2020). Accordingly, we suggest that after the initiating phase of early experimentation, **institutional entrepreneurs** and **place-leaders** need to create the wider regional structures to institutionalize and consolidate initial path development activities (Grillitsch and Sotarauta, 2020; Baumgartinger-Seiringer et al. 2021). This may include agentic processes geared towards the development of an industry-specific knowledge and skill base, of conditions that enable individual actors to contribute and coordinate their efforts, institutional change, market formation, establishment of organizational support structures, and so on (Binz et al. 2016; Trippl et al. 2020).

Similar ideas have been suggested in work on windows of locational opportunity (Storper and Walker 1989), which reasons that industry-specific assets co-evolve with the new path and are created once demand for them has emerged (Martin and Sunley 2006). In other words, a conducive regional environment is seen not as a precondition for, but as a result of, new path development. However, the concept says little about how and by whom this change comes about (Boschma et al. 2017). In contrast, this paper moves this collective process and its unfolding centerstage. Moreover, by explaining new path development through the interplay and co-evolution of structure and agency, our analytical framework does not place as much emphasis on exogeneous perturbations, chance events or historical accidents as triggers of change as earlier accounts of industry emergence.

In sum, our approach draws attention to the – often overlooked – enabling side of seemingly weak structural preconditions. We highlight the need for a dynamic multi-actor approach to unravel industry emergence, in particular in places with weakly elaborated structures. We propose a two-stage process of new path development. In the former, pioneers identify potential and initiate the formation of a new industrial path. In the latter, institutional entrepreneurs and place-leaders (acting both at the regional and at higher spatial levels) establish structures that are necessary for the new industry to grow, thus enhancing the consolidation of the new path.

Methodology

To illustrate this framework, we describe the emergence of Southern Québec's wine industry in two specific regions, the Eastern townships and Montérégie. Our approach consists of a theoretically informed, qualitative and historically-rich case study (Yin 1984; Eisenhardt 1989), tracing the industry's evolution from the late 1970s to today. As Jolly et al. (2020) argue, such a process-oriented investigation allows for a deep understanding of the interlinkages between agency and structures and to uncover processes of regional path development comprehensively.

Bearing this in mind, our research pieces together material from diverse sources in order to tell the story of the wine industry's emergence and evolution in Québec. The approach rests on three pillars. First, we draw on and present statistics from public sources that highlight the dynamism of Quebec's wine industry. Second, an analysis of secondary material provided important information. It also served to contextualize and triangulate other findings. The secondary material was obtained from three main sources: (i) documents and digital material published through various channels, such as websites and press releases; (ii) documents and articles from other sources, such as Société des Alcools du Québec (SAQ) and the Conseil des vins du Québec; (iii) material provided by public authorities, primarily in the form of industrial reports.

Finally, our research rests on interviews, both formal and informal, with key actors (e.g. winemakers, support organizations, government, enthusiasts, regulators). These interviews have been conducted by one of the authors over the last decade in the context of research on the wine industry in Canada. They cover aspects of the industry's birth and development and have been revisited to shed light on the broader question of path development. The information gathered provides original insight into the conditions under which winemaking has developed in Quebec and informs our interpretation of data and secondary sources.

The rise and evolution of Quebec's wine industry

To illustrate the crystallization of a new regional path, we first describe the current state of Québec's wine industry: it is a small but growing sector, well-established, institutionalized, and innovative. We then focus on its emergence, distinguishing two phases: first, an initiation phase, driven by a few foolhardy pioneers; then, a consolidation phase, characterized by institutional entrepreneurship and first signs of place-leadership enabling further development of the industry.

Quebec's wine industry today

Quebec's wineries are an example of emerging cool climate wine industries (Jones 2019), part of the 'New'-New-World (Chen and Kingsbury 2019). This 'New'-New-World (including, for example, the UK and Nordic countries) contrasts with the New-World (Li et al. 2018; Giuliani et al. 2011): whereas the latter comprises places where there existed appropriate climatic and soil conditions for wine growing (though no wine-making tradition), the former possess neither the traditions nor, in most cases, appropriate natural conditions.

The Quebec industry remains a marginal player in Canadian and global markets. In 2019, it comprises 148 commercial wineries with a production threshold of 4.25 million nine-liter equivalent cases. In 2016, Quebec accounted for less than 15 % of Canadian wine revenues[6], but over the last 30 years the number of production permits has steadily increased (Figure 1). Today, the industry sustains 1624 full-time-equivalent jobs, of which 925 are in wineries and vineyards (Rimerman and Eyler 2017). Production is dominated by independent family-owned wineries and by small companies that mainly sell their products on local domestic markets.

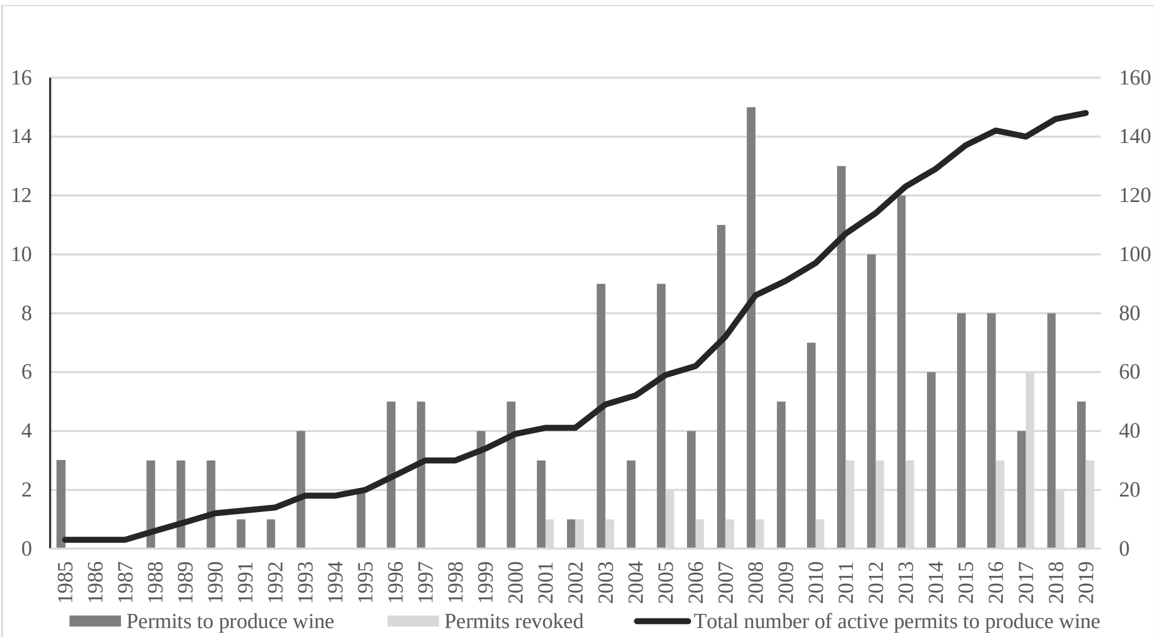

Figure 1. Artisanal wine production permits in Quebec, 1985-2019.
Source: Régie des alcools, des courses et des jeux, multiple years.

The industry produces a range of varietals, in particular hybrid varieties, such as Vidal, Frontenac, Seyval Blanc, Maréchal Foch and Sainte-Croix; but over the last decade changing climatic conditions (Jones 2012) have allowed wine makers to gradually

[6] Canada's wine industry is small by international standards. In 2018, it produces about 0.3% of world output (CVA 2019).

introduce better known – and more marketable - *Vitis vinifera* varieties such as Pinot Noir, Gamay, Cabernet Franc, and Chardonnay.

Since its emergence in the Eastern Townships (to the East of Montréal) and more recently in the Montérégie (closer to Montréal), Québec's wine industry has transformed from a marginal agri-food industry to a dynamic, relatively knowledge-intensive, industrial path. (Doloreux and Frigon 2019; Doloreux et al. 2015). It is characterized by consistent quality improvement, which is mainly based on on-site experimentation and learning, as winter hardy grape varieties require high levels of know-how and tacit knowledge. For instance, wineries have invested in geotextile or hoses heated by geothermal energy to extend the growing seasons and protect plants from intense winter cold. Accordingly, Quebec's harsh preconditions stimulated quite specific innovation activities undertaken by firms.

However, the rise of Quebec's wine industry is not only a story of innovative pioneers but also one of actors who lobbied for and established support organizations, altered institutions and coordinated efforts and thereby enabled the industry's development. Nowadays, viniculture in Quebec is embedded in facilitating structures that stand in a stark contrast to the initial situation in which early path development activities took place, including suitable regulations, market conditions and distributional channels as well as supportive public bodies and industry associations.

Hence, today's growing confidence in the industry's viability is a consequence of Schumpeterian and institutional entrepreneurship and first signs of place-based leadership (mainly undertaken at higher spatial scales), within the industry itself but also more widely in the agri-food and tourism sectors (Doloreux and Frigon 2019; Phillips 2017).

The emergence Québec's wine industry

Initiation stage

Cowboys and pioneers (1980-1985): forward-looking entrepreneurs

Wine making was virtually unheard of in Quebec until the province's first commercial winery, Le Domaine des Côtes d'Ardoise, opened in 1980 in Dunham. It was created by Christian Barthomeuf who migrated from Cantal (France). Its first bottles were produced illegally in 1983, because there was no licensing process for the production or sale of artisanal wine. The second commercial winery, Domaine de l'Orpailleur, was opened in 1982 by Charles-Henri de Coussergues and Hervé Durant, both from winemaking families in the Roussillon (France). With Barthomeuf's help, they bought a 20-hectare dairy farm and began (illegally) making and selling wine in 1985. These people are the pioneers of viticulture in Quebec, often described as bull-headed or crazy (Barthomeuf 2020; van Praet 2014).

These modest beginnings are critical, initiating the process of new path development (Figure 2). They beg the question of why winemakers emerging from the French winemaking tradition would consider settling and starting production in a seemingly unfavorable region such as Québec. There are two reasons for this.

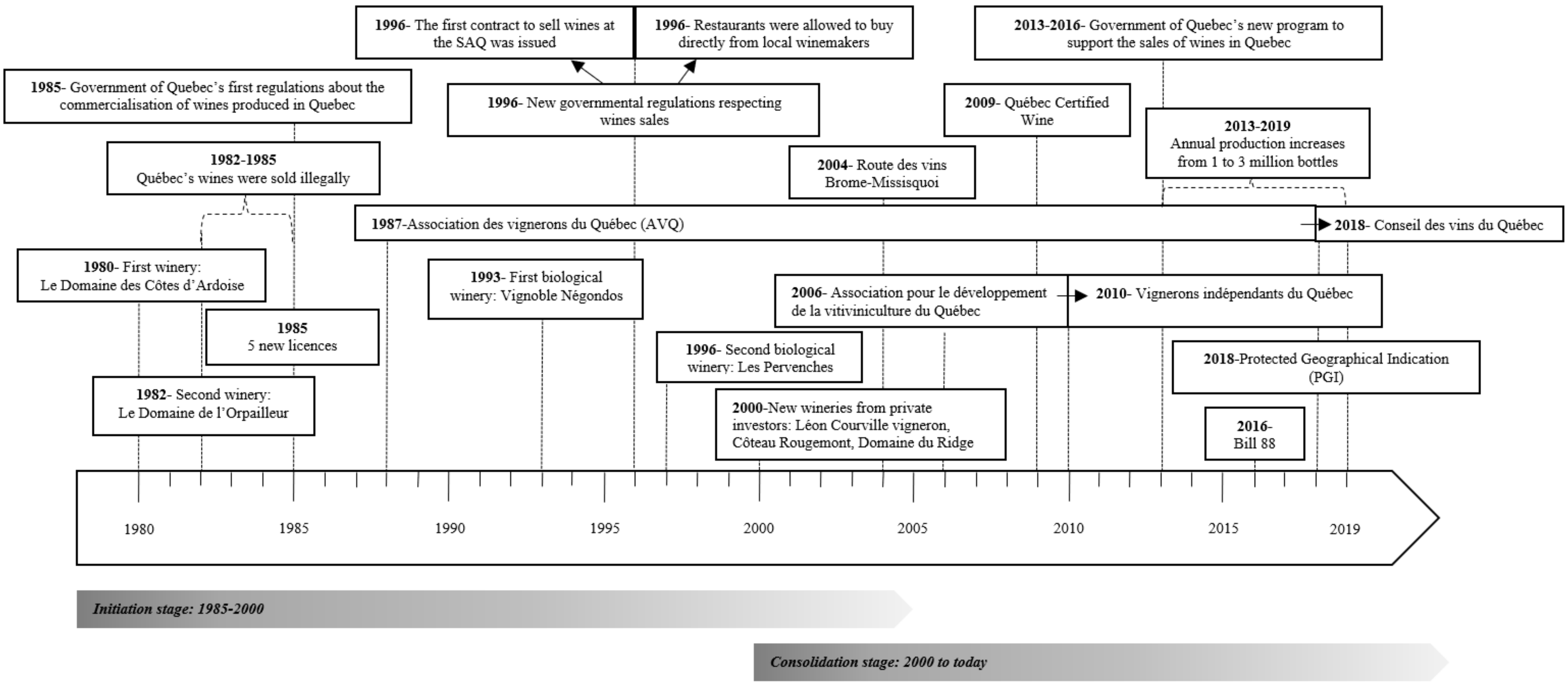

Figure 2. The emergence and evolution of Québec's wine industry

Source: Authors

First, the downside of tradition can be the stifling of innovation and entrepreneurship: many French people migrate to Québec because they chafe against France's strict hierarchy and regulated social and economic contexts (Roudaut 2009)[7]. Québec – especially in the early 1980s – beckoned to some French-speakers just as the rest of North-America did to anglophone and other migrants. Barthomeuf, who has proven to be a serial entrepreneur (credited with inventing ice-cider in the early 1990s, currently running a cider business, and winner of Canada's Governor General award in celebration of the Nation's table in 2010), participated in this search for emancipation from stultifying rules. The fact that he produced his first wines illegally speaks to this pioneering – maybe even cowboy – mentality and energy.

The second motivation that propelled the first few French winemakers in Québec is the challenge: the apparent impossibility of developing a commercially viable winery (let alone a wine industry) in Québec served as a spur to achieve the impossible. On the one hand, had the challenge been less acute, these particular pioneers may not have been so motivated; on the other hand, had the climatic and regulatory conditions been more clement, the wine industry would probably have developed along a more traditional New World path (and these clement conditions would have been interpreted as necessary preconditions). The apparent paradox of this case is that *the absence* of relevant preconditions (such as climate, competencies, suitable regulations or market conditions) motivated Québec's winemaking pioneers.

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[7] Québec is in fact a highly regulated society. However, in its rural areas there is still a sense of independence and freedom from constraint that does not exist in larger cities.

The sheriff: first regulatory and institutional changes (1985-2000)

Further to the industry's illegal beginnings, the first artisanal wine production permits were issued in 1985. In this early phase, wineries in Quebec were '*vineyard[s] of the extreme*' (Velasco-Graciet and Lasserre 2006), not only because of the climate but because of the legal and administrative hurdles erected by the province and the Société des Alcools du Québec (SAQ) – the public monopoly responsible for distributing and selling alcohol products.

The administrative restrictions of the mid-1980s are such that it is almost unbelievable, notwithstanding the pioneers, that winemaking developed in the province. Indeed, these conditions were so restrictive they seem designed to stifle rather than regulate the industry. The principal restrictions were (Le Domaine des Côtes d'Ardoise, 2020):

(1) in addition to the different taxes (sales tax, excise tax and duty), winemakers had to a pay an additional 30% sales tax to the SAQ;

(2) sales were limited to the vineyard only;

(3) wine tasting was prohibited (unless the vineyard had a liquor license);

(4) wine tasting was also prohibited in agricultural and wine exhibitions and fairs;

(5) the purchase of grapes from other winegrowers was not allowed;

(6) prohibition to deliver products and to sell to restaurants;

(7) prohibition to use common terms such as 'Domaine', 'Clos', 'primeur' to describe the vineyard or the wine itself; and,

(8) prohibition on selling to the SAQ (the provincial alcohol monopoly), even in cases where equivalent foreign wines would be purchased (for example even internationally prize-winning Québec wines were excluded from the SAQ).

Given the harsh climate and administrative stranglehold, the 1985-2000 period is characterized by a slow increase in the number of wine-making permits (Figure 1). By 2000, there were only 39 commercial wineries - of which 13 returned their permit due to low volume and high production costs. On the one hand, this clearly reflects the constraints that prevailed at the time. Yet, on the other hand, it shows that a number of pioneers stubbornly held onto their belief in the region’s potential.

The major obstacle to expansion of Quebec’s vineyards was the difficulty of selling products and the absence of market-oriented mechanisms to support sales. An inflexion-point in the industry’s development was the introduction of new sales regulations. In 1996, the government allowed wine producers to sell their products to restaurants, bars, hotels, at public markets and at agricultural fairs. Winemakers could use the terms ‘Domaine’, ‘Clos’, and ‘Côtes’, etc. (important for marketing purposes) and were no longer required to produce all grapes used in their wines, though at least 50% still needed to be sourced from the vineyard. The same year the SAQ signed its first distribution contract with le Domaine de l’Orpailleur. These changes occurred in part due to persistent lobbying by the of Association des Vignerons du Québec (AVC, Québec Winemakers’ Association).

These adaptations of formal institutions mark the humble beginning of a phase of increased adaptations of the broader innovation system structures which gradually turned the unfavorable environment into a more enabling one. The period corresponds to the establishment of new institutions and support organizations enhancing the industry's development and new promotional activities to discover and promote local vineyards. Since 2000, Quebec's wine industry has expanded, with a threefold increase from 39 commercial wineries to 148 in 2019 (Figure 1). However, it is important to note that until the end of the 1990s provincial regulators reacted rather reluctantly to these first efforts of institutional entrepreneurship and adapted institutions only slightly to the *fait accompli* of local winemaking.

Consolidation stage

The development of markets for Québec wines: 2000 to today

In addition to regulatory factors, it is useful to consider the structure of demand for wine: since about 2010 there has been a sharp increase in wine consumption, and growing interest in domestic products. Quebec is the largest wine-importing province in Canada: in 2015, consumers spent $2.3 billion on retail wine, representing 43 % of total alcoholic beverage spending (USDA Foreign Agricultural Service 2017). Between 2000 and 2018 Quebec's wine consumption consisted predominantly of imported wines, with modest – but fast growing - volumes of domestic wine[8] (Table 1).

[8] It was not possible to disaggregate the data for Canadian products at the level of Quebec.

		2000 (000s)	2005 (000s)	2010 (000s)	2013 (000s)	2018 (000s)	Change 2000-2018 (000s)	Growth rate (percentage)
Total Wine*	Total products	987,278	1,438,138	2,025,631	2,320,884	2,387,885	1,400,607	58.6
	Domestic products	169,429	188,898	451,936	503,037	472,023	302,594	64.1
	Import products	817,849	1,249,240	1,573,695	1,817,847	1,915,862	1,098,013	57.3
							Change 2000-2013 (000s)	Growth rate (percentage)
Red wines	Total products	508,290	946,223	1,441,292	1,580,389	n/a	1,072,099	67.8
	Domestic products	62,671	92,267	304,685	326,661	n/a	263,990	80.8
	Import products	445,619	853,956	1,136,607	1,253,727	n/a	808,108	64.4
White wines	Total products	33,472	36,501	502,473	655,897	n/a	622,425	94.8
	Domestic products	78,712	76,623	124,437	150,610	n/a	71,898	47.7
	Import products	256,008	288,387	378,037	505,287	n/a	249,279	49.3
Sparkling	Total products	73,036	86,526	161,056	181,653	n/a	108,617	59.7
	Domestic products	8,867	6,126	26,216	31,733	n/a	22,866	72.0
	Import products	64,169	80,400	134,840	149,920	n/a	85,751	57.1

Table 1. Sales of alcoholic beverages of liquor authorities, Quebec 2000-2018 (in $)

Source: Statistics Canada. Table 10-10-0030-01 Sales of alcoholic beverages of liquor authorities, wineries and breweries, by value and volume, fiscal years ended March 31 (x 1,000) . * Exclude the category: Unidentified wines

Reacting to these changes, and in response to further lobbying, new strategies were implemented by the SAQ to promote local wine. For instance, in 2005, the SAQ introduced a Quebec wine section in its stores and increased the variety of domestic products sold. By 2020, the SAQ sold 119 different Quebec wines, and Quebec's wine industry has expanded, with a threefold increase from 39 commercial wineries in 2000 to 148 in 2019 (Figure 1).

It is not only production and sales outlets that have evolved since 2000. In 2013, the government, in collaboration with the SAQ, introduced a commercialization program for Quebec wines. With an investment of $4.3 million over three years, new measures include financial aid to increase both productivity and quality, and improved product visibility in SAQ stores. In 2016, the government introduced Bill 88. This law allows the distribution of Quebec wine via groceries and convenience stores, and has encouraged new distribution channels such as wine boutiques, gourmet food stores and online shops.

Since the first of these regulations was introduced, annual wine production in Quebec increased from 1 (in 2013) to 2.3 million (in 2019) bottles (CVQ 2020). Accordingly, distributed action brought about the adaptations necessary to develop facilitating market conditions for the wine industry.

Institutional change and the development of support organizations

Since the late 1990s the organizational and institutional context – which at first inhibited the development of Québec's wine industry – has adapted. In the 1990s this adaptation was slow and almost reluctant, but over the last twenty years there has been more evidence of institutional entrepreneurship at the provincial level. Whilst the institutional environment has become supportive, it remains underdeveloped, particularly in terms of R&D support. In this subsection we describe the development of institutional configurations and support organizations over time.

Most institutions are *provincial*: constitutionally, the regulation of alcohol sales, wine production and agriculture come under provincial jurisdiction: the Federal (Canadian) government plays virtually no role. In this context, three forms of support organization have emerged: public bodies, industrial associations, and research organizations.

The wine industry in Quebec is strongly regulated, with two organizations playing pivotal roles, the SAQ and the Régie des alcools, des courses et des jeux (RACJ, which regulates alcohol, lottery, publicity contests, gambling, racing, and combat sports). While the SAQ is responsible for sales and distribution of alcohol in Québec, the RACJ fashions the underlying regulatory environment for alcohol production and sale. The RACJ grants licenses for the manufacture and distribution of alcoholic beverages, for artisanal wine and beer production, and for the warehousing of these beverages. At first, these organizations discouraged local wine production, only gradually recognizing its potential under pressure from pioneering winemakers (and, more recently consumers).

In addition to the SAQ and RACJ, other government departments assist in the regulation and promotion of wine, as well as protecting producer interests. The Quebec Ministry of Agriculture, Fisheries and Food (MAPAQ) operates programs focusing on agriculture and food production. It supports artisanal wine producers, promotes Québec wine, played an important role in securing a designation for Québec wines, and has carried out exploratory research to support the industry. At the Federal level, Agriculture and Agri-Food Canada (AAFC) provides similar support and finances projects related to the agri-food sector, a small portion of which benefits the wine industry.

The *Conseils des Appellations Réservées et des Termes Valorisants* (CARTV) was set up in 2006 by the Government of Québec as an independent organization "*to develop and maintain the recognition, certification, inspection and information systems that allow groups of agri-food enterprises to use a designation for products distinguished by their origin or quality as well as to ensure the integrity of these products in order to gain the confidence of those who consume them*" (CARTV 2020). The CARTV accredited, in 2008, the designation 'Vin Certifié du Québec' (Québec Certified Wine) which certifies wine's origin and specificity. In 2010, CARTV recognized Ecocert Canada, allowing it to certify wines according to the AVQ certification manual which specifies traceability and sustainable practices. This has evolved into "Indication Géographique Protégée (IGP) pour les vins du Québec" (Protected Geographical Designation for Quebec wine).

Over the years the industry itself has contributed to build favorable innovation system structures and has demonstrated first signs of successful place-based leadership. For instance, it has generated its own collective interest organizations on the provincial level, such as the Conseil des Vins du Québec (CVQ) and Association des Vignerons Indépendants du Québec (VIQ). The CVQ was created in 1987 by the pioneers. It is a bottom-up initiative reflecting the need for operational and strategic interaction and coordination within the wine industry, founded and funded by its members: the CVQ mobilizes resources, know-how and lobbying on issues related to marketing, vintner prosperity, scientific development and knowledge sharing. Hence, the CVQ also plays a prominent role in efforts of institutional entrepreneurship.

For instance, the CVQ has been instrumental in pushing for the 'Québec Certified Wines' label, it published a forward-looking report 'Plan de développement 2010-2020' that provided a foundation for the recent development of Quebec's wine industry, and it lobbied for and promoted the 'Protected Geographical Indication designation'. In 2020, the association comprises overs 80 members, including 60 winegrowers and 20 inter-professional members.

The VIQ, created in 2006, comprises independent winemakers from different regions in Quebec, and promotes the exchange of information and knowledge related to the industry and wine production. This association is part of the Vintners Quality Alliance network established in Ontario and British-Columbia and the *Confédération Européenne des Vignerons Indépendants* which covers 11 countries.

In contrast to wine-growing regions in Ontario and British Columbia – Quebec's wineries are not yet supported by a network of public and private research organizations: the adaptation of the broader regional structures is still an ongoing process. With only $0.5 million invested in 2017 in education and public R&D, the Quebec wine industry has limited resources for improving crops and product quality, or to test new vine varieties and growing practices (Rimerman and Eyler 2017). However, some research is conducted under the auspices of broader agricultural and agri-food activities, such as the Centre de recherche Agricole de Mirabel (CRAM), a non-profit organization that provides research and technology transfer services in horticulture and agri-food.

There has been some effort to bolster the research base: the *Centre de référence en agriculture et agroalimentaire du Québec* (CRAAQ) has set up a network of advisory services mandated to promote wine-related research, innovation and knowledge transfer - the *Comité Vigne et vin*. There is also some research collaboration between the CRAM, MAPAQ and CVQ, for example research on cold-climate grape varieties and growing techniques (CRAM 2020). Overall, though, R&D is conducted on a piecemeal basis within organizations that have far broader mandates, by winemakers themselves in a somewhat ad-hoc manner or by relying on external knowledge sources and partners.

In sum, there have been an increasing number of successful endeavors – in particular since the turn of the millennium – to establish support structures to consolidate Southern Québec's wine industry and to facilitate new path development. However, place-based leadership at the regional level remains weakly developed at best. Hitherto, first efforts have only occurred at the provincial level.

Discussion

In this paper we suggest a framework that conceptualizes path development *ex nihilo*, i.e. in regions that present few if any branching opportunities, that are organizationally and institutionally thin, and that present no particular natural advantages. These regions differ from most European regions which have been settled for a long time and where new paths, even if they are unrelated to previous economic activities, often take root in better defined cultural contexts. The Eastern townships – traditionally Abenaki territory - were essentially unsettled (by colonial settlers) until the early 19th century. Their principle industries have been agriculture, forestry and – in a few urban centres – textiles. Closer to Montreal the townships have also become an area where cottages and second homes were purchased.

None of these are preconditions – particularly in the context of severe and long winters – for the development of a local wine industry. We suggest that regional paths can emerge in such conditions because local conditions cannot be evaluated whilst abstracting from the agents who act within and upon them. Whilst many rational agents (and analysts) would view these initial conditions as inauspicious, clearly some agents perceived them as advantageous.

The potential that some agents perceive, despite inauspicious preconditions, are not necessarily linked to rational economic calculation, though they might be: for example, such regions may be low-cost, may allow for experimentation away from stifling institutions, or may present ideal conditions for very specific innovations. Yet, their perception of advantage can also be linked to the challenges posed by such conditions. Initiating activities in these regions can stimulate innovation merely as a way to find solutions. Apparently unfavorable conditions may also allow certain actors to apply their knowledge (such as the traditional winemaking know-how of the Roussillon) in new and exciting contexts.

The Québec wine industry is a good example of this. There was no apparent reason, in the early 1980s, for anyone to produce wine in Québec: France and Spain were overproducing, and New-world wines from countries with better viticulture conditions – such as Argentina, Chile, and Australia – were gaining widespread acceptance. Why, therefore, attempt to start a wine industry in Québec, where making and bottling wine was illegal, where winters are brutal, and where the growing season is short? The industry was started by two maverick wine growers from France, who were essentially excited by the challenge and eager to leave behind the old world. Had conditions been more auspicious it is possible that they would have sought challenges elsewhere (Barthomeuf 2020).

These winemakers did not merely initiate the practice of making wine commercially. They quickly become involved in challenging existing laws and institutions. As other winemakers gradually followed their example, lobbies and collective interest organizations were formed, winegrowers pushed for change, and consumers slowly began to show an interest in local produce (despite its initial expense and poor quality relative to imports).

From about the mid-1990s, institutional change had gained a momentum of its own, and organizations such as the SAQ began taking the initiative, becoming a cumbersome - yet essentially constructive - partner in the continued development and maturation of the industry and the wider innovation system. Many more winemakers were attracted to the activity, which today plays a small but important role in regional tourism and whose products are available across Québec, in grocery stores, restaurants and the SAQ. Winemakers increasingly devote funds to product, process and marketing innovation, and it is fair to say that a minor but established, legitimized and dynamic industrial path embedded in a supportive environment now exists in Southern Québec.

However, it is important to note that of the trinity of agents of change posited by Grillitsch and Sorarauta (2020), only two are present: Schumpeterian entrepreneurs and institutional entrepreneurship. The third, place-based leadership, is lacking regionally. There are some efforts observable at higher spatial scales though. Most notably, collective interest organizations on the provincial level (such as the CVQ and VIQ) have been created that play a pivotal role in mobilizing and coordinating actors. While it is well established that exogenous influences can affect regional path development (Trippl et al., 2018), these insights arguably pose an interesting avenue for future research concerning the multi-scalarity of agency: (to what extent) can different types of agency substitute for each other at different scales? How do regional (local) and non-regional (non-local) agency interact in the course of path development? While we believe that there is a lot of merit in following these questions, they were beyond the scope of this article.

Conclusions

Over the recent years, a rich body of EEG literature has led to better understanding of how new industries emerge in space (Martin 2010; Boschma 2017). Lately, a more comprehensive perspective which combines EEG insights with the RIS approach has been developed (Isaksen and Trippl 2016; Trippl et al. 2020). These contributions emphasize regional structural preconditions, understood as the outcome of previous rounds of regional economic development, reflecting the history of a locality (Martin 2010). In doing so, these perspectives – from different conceptual lenses – articulate relatively clear ideas of what preconditions enable or constrain new path development.

This paper challenges established views on how regional structural preconditions affect industry emergence, paying particular attention to weakly elaborated structures. Our contribution is twofold. First, we show that structural preconditions offer complex, multifaceted conditions for nascent industries, always encompassing opportunities and constraints (Baumgartinger-Seiringer et al. 2020). The rise of the wine industry in Quebec demonstrates that weakly developed preconditions do not only pose barriers to new path development; they also offer potential. This understanding of the impact of structures is inseparably linked to the role of agency (Grillitsch and Soraurata, 2020). Herein lies our second contribution. We uncover how preconditions are transformed into a new path through agentic processes. In line with other work, we argue that industry emergence cannot be comprehensively understood without considering the role of agency (Simmie 2012, Boschma et al. 2017). It is the embedded agents that make sense of structural conditions; they identify, harness and valorize opportunities and overcome constraints (MacKinnon et al. 2019).

Agents act on the basis of motivation: Quebec's maverick pioneers had clear, but essentially non-economic, reasons for choosing Québec, linked to culture (the French language), *absence* of wine-making tradition, and *challenging* conditions for wine growing. Their arrival and their actions brought about alterations necessary for a new path to emerge and prosper.

We propose two main stages of new path development: an initiation and a consolidation stage (Baumgartinger-Seiringer et al. 2021). As we have shown, in the early stage pioneering actions aimed at exploiting regional potential prevail, while in the later stage institutional entrepreneurship and place-leadership geared toward path consolidation becomes important. This is particularly the case in settings with weakly developed structural conditions, where the development of organizational and institutional support structures is pivotal to turn the seeds planted by pioneers into fully established paths. These insights are crucial for a more thorough understanding of new path development.

Our conceptual framework, which posits co-evolution of, and inter-dependence between, structure and agency, calls for a reassessment of methodologies that are often used when new path development is analyzed. There has been considerable reliance on network analysis, patent data, and other quantitative approaches (Boschma et al 2017): these are good at identifying structures and knowledge bases, and also answer Markusen's (1999) call for more rigorous hypothesis testing. However, qualitative approaches can also provide valuable information.. No amount of network analysis, data gathering or dissection of pre-existing structures can explain the emergence of today's wine industry in Québec, whereas our qualitative and process-oriented case-study (Jolly et al. 2020), which pays attention to structure, agency, and their co-evolution, can unravel it.

Finally, the proposed framework bridges the gap between the emergence of individual innovators in unpromising regions and the wider question of regional development. Shearmur (2017) has pointed out that innovation in a region does not necessarily lead to regional development (nor to the emergence of a localized industry): the case described in this paper is an example of a (not quite complete) bridge between the two.

Our study explores a single case and examines an industry in a particular context. It illustrates our conceptual framework. More investigations of new industry emergence and evolution in inauspicious regional settings will be necessary to better understand how seemingly weak conditions can nurture new industrial growth paths.

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